

# Ground Water Quality and Riparian Enhancement Projects in Sherman County, Oregon

## Coordination and Technical Assistance

Annual Report  
2002 - 2003



DOE/BP-00009956-1

June 2003

This Document should be cited as follows:

*Faucera, Jason, "Ground Water Quality and Riparian Enhancement Projects in Sherman County, Oregon", Project No. 2002-01500, 8 electronic pages, (BPA Report DOE/BP-00009956-1)*

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208

This report was funded by the Bonneville Power Administration (BPA), U.S. Department of Energy, as part of BPA's program to protect, mitigate, and enhance fish and wildlife affected by the development and operation of hydroelectric facilities on the Columbia River and its tributaries. The views in this report are the author's and do not necessarily represent the views of BPA.

**Ground Water Quality and Riparian Enhancement Projects in  
Sherman County, Oregon:  
Coordination and Technical Assistance**



**[Originally titled: Providing Coordination and Technical Assistance to  
Watershed Councils and Individuals in Sherman County, Oregon]**

**BPA Project No. 2002-015-00  
Contract #9956**

**Annual Report  
For The Period May 1, 2002 To April 30, 2003**

**June 2003**

**Prepared for**

**Bonneville Power Administration**

**by**

**Jason Faucera  
Sherman County Soil and Water Conservation District  
P.O. Box 31  
Moro, OR 97039**

## **ABSTRACT**

This project was designed to provide project coordination and technical assistance to producers in Sherman County for on the ground water quality enhancement and riparian enhancement projects. This is accomplished utilizing the USDA Conservation Enhancement Reserve Program (CREP) and other grant monies to translate the personnel funds in this project to on the ground projects. Two technicians and one watershed council coordinator are funded, either wholly or in part, by funds from this grant.

The project area encompasses the whole of Sherman County which is bordered almost entirely by streams providing habitat or migration corridors for endangered fish species including steelhead and Chinook salmon. Three of those four streams and one other major Sherman County stream are listed on the DEQ 303(d) list of water quality limited streams for exceeding summer temperature limits. Temperature in streams are directly affected by the amount of solar radiation allowed to reach the surface of the water. Practices designed to improve bank-side vegetation, such as the CREP program, will counteract the solar heating of those water quality listed streams, benefiting endangered stocks.

CREP and water quality projects are promoted and coordinated with local landowners through locally-led watershed councils. Funding from BPA provides a portion of the salary for a watershed council coordinator who acts to disseminate water quality and USDA program information directly to landowners through watershed council activities. The watershed coordinator acts to educate landowners in water quality and riparian management issues and to secure funds for the implementation of on the ground water quality projects.

Actual project implementation is carried out by the two technicians funded by this project. Technicians in Sherman County, in cooperation with the USDA Natural Resources Conservation Service, assist landowners in developing Resource Management Systems (RMS) that address resource concerns in a specified land unit. These RMS plans are developed using a nine step planning process that acts to balance natural resource issues with economic and social needs. Soil, Water, Air, Plants, Animals, and Human resource concerns are the core focus in developing a framework for improving the efficiency and effectiveness of conservation activities in a given planning unit, while working within the guidelines set forth by the National Environmental Policy Act (NEPA), Clean Water Act (CWA), Endangered Species Act (ESA), Magnuson-Stevens Act (MSA), National Historic Preservation Act (NHPA), and other federal, state, and local laws.

Implementation of this project has resulted in providing technical and implementation assistance for numerous on the ground projects, including over 50 WASCBs, several thousand feet of terraces, two implemented CREP contracts, and the development of 3 additional CREP projects slated for enrollment at the beginning of FY '04. In addition to the increase in on the ground projects, coordination and outreach to solicit conservation projects in Sherman County has increased due to the additional

staffing provided by BPA funds. As a result there is an abundance of potential conservation projects for water quality and riparian management improvement.

With the sustained availability of coordination and technical assistance provided through this grant, BPA personnel funds will translate to a much higher dollar figure applied on the ground. This project has been very successful in reducing the backlog of conservation projects within Sherman County, while adhering to the objectives set forth for this grant.

## **INTRODUCTION**

Sherman County SWCD partners with locally-led watershed councils to attempt to produce an overall change in land use patterns across the private lands between the Lower John Day and Lower Deschutes Rivers for the benefit of improving overall watershed health. Sherman County Soils and Water Conservation District *Long Range Plan* (July 1998) calls for the SWCD to utilize an ecosystem approach to watershed enhancement and protection by (among other actions) helping to establish and support local watershed councils and by encouraging local participation in watershed planning and restoration activities.

This project acts to satisfy a critical need for conservation project coordination and technical assistance in the lower Deschutes and Lower John Day Basins. The staffing support provided through this project addresses a backlog of conservation projects aimed at improving water quality and enhancing riparian corridors, benefiting overall watershed health. This project also addresses Action items 152 and 153 of the 2000 FCRPS Biological Opinion through the planning and implementation of water quality, and CREP projects in Sherman County.

## **DESCRIPTION OF PROJECT AND PROJECT AREA**

This project, entitled “Providing Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon,” works to provide funding for two technicians and one watershed coordinator for planning, implementing , and monitoring CREP and water quality projects for landowners in Sherman County. All work is done in cooperation with other federal, state, and local agencies to avoid duplication of efforts and to provide the widest possible range of conservation experience, maximizing project efficiency and effectiveness.

Action item 153 of the 2000 FCRPS Biological Opinion states that “BPA shall negotiate and fund long term protection...of riparian buffers...working with agricultural incentive programs such as the Conservation Reserve Enhancement Program (CREP).” This project meets the goal of working with the CREP program to protect and enhance riparian corridors on streams with a history of threatened and endangered fish species presence. Technicians work under the guidelines set forth in the NRCS Field Office Technical Guide (FOTG) to provide riparian tree planting and grass seeding to filter contaminants and reduce solar radiation impact on streams. Landowners are committed

to 10-15 year contracts that lease riparian land adjacent to streams approved by ODFW for their ability to support spawning, rearing , or migration of threatened and endangered fish species. Riparian buffers can range in width from a minimum 35 feet to a maximum 180 feet on one side of an eligible stream, giving the possibility of a 360 foot buffer zone for a stream with both sides enrolled in the program. Landowners are required to plant trees and exclude livestock from the buffer zone for the length of the CREP contract, giving the buffer the ability to regain important functionality in filtering contaminants and reducing direct solar radiation of streams.

In addition to receiving a lease payment for land committed to a CREP buffer, landowners receive cost share money and incentive payments to install approved practices within the buffer such as fencing for livestock exclusion, off-stream water developments, tree planting materials and labor, irrigation for tree and shrub establishment, among others. These payments result most often in total cost share for participants. There is no money directly invested into buffers by BPA, as the entire cost share and lease payments are provided through the USDA CREP Program. BPA funds make the promotion and planning of CREP buffers possible in Sherman County through the positions funded by this grant.

This project has also funded planning and technical assistance for the development of thousands of feet of terraces, over 50 Water and Sediment Control Basins (WASCBs), numerous spring developments, and many other projects with the cumulative effect of improving overall watershed health and water quality. Improved watershed health benefits fish and wildlife populations, keeping with the goals of Action item 152 of the 2000 FCRPS Biological Opinion that states “These actions are intended to improve Columbia River basin water quality, with the goal of being consistent with or complementing the NWPPC amended fish and wildlife program...and state and local watershed planning efforts.”

Common practices employed by Sherman County producers include the development of sediment control structures that act to reduce sheet, rill, and classic gully erosion in addition to reducing sediment load into streams. Terracing and Water and Sediment Control Basin (WASCBs) systems are designed to trap sediment before it leaves agricultural fields while simultaneously capturing, storing, and safely releasing overland water flows at a much reduced velocity. Another common practice utilized in Sherman County is the Spring Development which provides a viable alternative to using streams for supplying livestock and wildlife with clean water. This practice is invaluable in giving riparian areas the resting periods needed to allow natural vegetation to maintain its health and vigor. Other water quality and wildlife enhancement practices include grazing management plans, range seeding, brush control, and fencing, all of which provide a cumulative improvement in overall watershed health.

CREP and water quality projects are promoted and coordinated with local landowners through locally-led watershed councils. Funding from BPA provides a portion of the salary for a watershed council coordinator who acts to disseminate water quality and USDA program information directly to landowners through watershed

council activities. The watershed coordinator acts to educate landowners in water quality and riparian management issues and to secure funds for the implementation of on the ground water quality projects.

The project area encompasses the whole of Sherman County which is bordered almost entirely by streams providing habitat or migration corridors for endangered fish species including steelhead and Chinook salmon. Three of those four streams and one other major Sherman County stream are listed on the DEQ 303(d) list of water quality limited streams for exceeding summer temperature limits. Temperature in streams are directly affected by the amount of solar radiation allowed to reach the surface of the water. Practices designed to improve bank-side vegetation, such as the CREP program, will counteract the solar heating of those water quality listed streams, benefiting endangered stocks.

Agriculture is the predominant land use in Sherman County with crops consisting mainly of dry-land grain on two year winter grain-summer fallow rotations. Many producers use conventional tillage practices in combination with leaving a percentage of straw residue after harvest in order to conserve moisture and reduce soil losses to wind and water erosion. There are also producers that utilize a no till crop rotation that allows minimum disturbance to the soil while increasing water infiltration, further reducing soil erosion. Other agricultural activities involve rangeland management for grazing and wild life, and enrollment of acres in the Conservation Reserve Program (CRP).

Conservation project planning and implementation is spearheaded in Sherman County by the Soil and Water Conservation District and local watershed councils in partnership with the USDA NRCS. These agencies are committed to improving overall watershed health to maintain beneficial uses of water throughout Sherman County and beyond its borders.

## **METHODS AND MATERIALS**

Technicians in Sherman County, in cooperation with the USDA Natural Resources Conservation Service, assist landowners in developing Resource Management Systems (RMS) that address resource concerns in a specified land unit. These RMS plans are developed using a nine step planning process that acts to balance natural resource issues with economic and social needs. Soil, Water, Air, Plants, Animals, and Human resource concerns are the core focus in developing a framework for improving the efficiency and effectiveness of conservation activities in a given planning unit, while working within the guidelines set forth by the National Environmental Policy Act (NEPA), Clean Water Act (CWA), Endangered Species Act (ESA), Magnuson-Stevens Act (MSA), National Historic Preservation Act (NHPA), and other federal, state, and local laws.

Programs and grant funding for CREP and water quality projects are marketed using several different strategies all with the purpose of providing landowners the information necessary to make informed management decisions. This project has

allowed Sherman County the technical expertise and personnel required to develop the following communication tools for CREP and water quality project education and outreach: Sherman SWCD website, quarterly newsletter, programmatic and informational mailings, watershed council meetings, district meetings, conservation displays at public events, annual tree sale, among many others. These methods all encourage landowners to seek technical assistance through the Sherman County USDA Service Center.

Once landowners contact the office for technical assistance or program information, the nine-step planning process begins.

- Step 1 – Problems and opportunities are identified with the landowner
- Step 2 – Project objectives are determined for how to solve a given problem
- Step 3 – Existing resources are inventoried and documented
- Step 4 – Inventoried resources are analyzed and compared to area standards
- Step 5 – Formulate alternatives to current management activities
- Step 6 – Evaluate alternatives for applicability and feasibility
- Step 7 – Make decisions on which alternatives are to be implemented
- Step 8 – Implement plan
- Step 9 – Evaluate plan and revise if necessary

Enrolling producers in CREP is an involved process that utilizes the nine step planning process once the producer has officially signed up for the program. Outreach via watershed council meetings, direct mailings, local planning processes, website promotion, demonstrations, and estimates of benefits are provided to both educate and interest producers in signing up for enrollment.

Once a CREP contract is established, practices such as the tree planting requirements, grass seeding, fencing, use exclusion, and off stream watering are implemented and cost share is provided through the USDA Farm Service Agency office. For three years after enrollment, projects must be annually monitored to assure that specifications for tree planting and other practices are being met. If landowners need additional cost share or technical assistance after implementation, they must request that assistance before the end of their three year window or else the fiscal and technical responsibilities fall upon that landowner.

## **RESULTS AND DISCUSSION**

Implementation of this project has resulted in providing technical and implementation assistance for numerous on the ground projects, including over 50 WASCBs, several thousand feet of terraces, two implemented CREP contracts, and the development of 3 additional CREP projects slated for enrollment at the beginning of FY '04. In addition to the increase in on the ground projects, coordination and outreach to solicit conservation projects in Sherman County has increased due to the additional staffing provided by BPA funds. This project has been very successful in reducing the



backlog of conservation projects within Sherman County, while adhering to the objectives set forth for this grant.

Objectives for implementation of this project include the coordination of projects with other state and federal agencies. Coordination within watershed councils assures that local efforts are focused and not duplicated. Projects are brought from council meetings to the district which then coordinates the involvement of other agencies for implementation. Currently SWCD employees are involved in several planning processes to insure interagency communication. The watershed coordinator and technicians are involved in the Sub-Basin planning efforts in both the John Day and Deschutes Sub-Basins which brings numerous agencies together to identify Sub-Basin priorities. The Sherman SWCD is also the local management agency for the Lower John Day Ag Water Quality Planning Process. The Oregon Department of Forestry, Bureau of Land Management, and US Fish and Wildlife agencies have provided input on CREP planning and implementation for plans in Sherman County. These partnerships make planning efforts more efficient and eliminate the duplication of work.

Project coordination also involves applying for and securing funds to implement watershed improvement projects. Many federal and state agencies provide funding for projects that result in an environmental benefit. Funding and in kind services have been applied for and received through the watershed coordinator position partially funded through this grant. Grant awards in the amount of \$220,000 were received through input by the watershed councils, SWCD technicians, and watershed coordinator. These funds will be used to implement watershed improvement projects in Sherman County over the next 2-3 years. In addition another grant for \$60,000 has been recommended for funding for FY 2004 for structural practices to improve watershed health within Sherman County.

Other objectives include providing technical assistance, and verifying the adherence of work performed to NRCS standards and specifications. These objectives are inherent in the planning methodology employed by the Sherman County SWCD and NRCS. Before cost share dollars are allocated by most funding agencies, a technician must measure a project versus nationally developed standards for the applied practices. Because the NRCS nine step planning process and NRCS Field Office Technical Guide (FOTG) are used in developing practices, the Sherman County SWCD is required, through a cooperative agreement with NRCS, to provide documentation of compliance with FOTG standards and NEPA, NHPA, CWA, ESA, and MSA requirements.

Three positions are funded, either in part or entirely, through this grant to accomplish the project objectives. Instead of directly translating dollar for dollar to on the ground projects, these positions leverage a much higher ratio of project dollars spent vs. BPA funds spent. The total dollar amount leveraged for watershed improvement and CREP projects was in excess of \$170,000 compared to \$54,000 in BPA dollars spent.

With the increased personnel support provided in part by this grant, the Sherman County SWCD and watershed councils were able to address a growing backlog of conservation projects. However, there is still a large demand for technical and financial

assistance for watershed improvement. Also during the year, half of the money to support a full time watershed council coordinator was cut. This caused a personnel shift and subsequently reduced the amount of time available for technical assistance. This problem has been alleviated with the hiring of a part time watershed coordinator, and on the ground project implementation is back to its original output. With the office staff at full strength on the ground projects are being implemented and new projects are being developed.

Another important aspect of protecting watersheds and riparian areas is educating landowners about watershed and stream health and providing them solutions to resource concerns on their land. In the matter of riparian issues, we heavily market the benefits of the CREP and CCRP programs both environmentally and economically. These projects are promoted at all meetings through examples of successful projects, cost benefit estimates, flyers, or informational literature on how programs work to improve watershed health and function. Much of this outreach is provided through the personnel support provided in this grant. Continued outreach and education will increase more demand for CREP and water quality projects in the coming year.

With the hiring of new employees there has been a learning curve and training period to get the new technician and coordinator acclimated to the goals and specifications of conservation projects. With all of the state and federal guidelines including NEPA and ESA requirements, in addition to computer, engineering and planning requirements, the learning curve has been steep. The continuity in personnel from this grant has allowed the necessary training to take place and the results will be seen through increased conservation activity in the next contract period.

## **SUMMARY AND CONCLUSIONS**

This project has been very successful in addressing the growing demand for conservation projects in Sherman County. With many of the issues that come along with training new personnel resolved, productivity in seeking and implementing conservation projects in Sherman County should increase to meet the demand of local producers. There is an abundance of potential conservation projects for water quality and riparian management improvement. With the sustained availability of coordination and technical assistance provided through this grant, BPA personnel funds will translate to a much higher dollar figure applied on the ground.

## **SUMMARY OF EXPENDITURES**

|                           |                     |
|---------------------------|---------------------|
| Personnel Salaries        | \$ 37,383.33        |
| OPE                       | \$ 5,272.63         |
| Travel                    | \$ 1,373.19         |
| Materials & Services      | \$ 3,225.98         |
| Laptop Computer           | \$ 2,830.96         |
| Administrative Overhead   | \$ 4,500.00         |
| <b>TOTAL EXPENDITURES</b> | <b>\$ 54,586.09</b> |